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ABSTRACT

This report describes a British study designed to produce a business model for an e-university, a concept that did not previously exist. Part 1, "Aims and Objectives," describes the background of the effort, the challenge to the United Kingdom, goals, and objectives. Part 2, "The Business Model," describes: the basic concept; markets, courses, and modules; content design, production, and procurement; learner support; coherence and awards; learner choice and advice; technological underpinning; ownership and structure; corporate functions; revenue opportunities and headline costs; initial markets; and development of a distinctive brand to attract and maintain a significant share of the e-learning marketplace. Part 3, "Conclusions and Next Steps," notes that the e-university will consist of a set of facilities, devices, and mechanisms to enable potential consumers to access the best of United Kingdom higher education. It describes the next steps as falling into four phases: consultation, development, implementation, and launch. Appended in a separate document are: examples of e-initiatives in higher education, options for the corporate structure of the e-university, learning products and services, and technology aspects. (SM)

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Report

Business model for the e-university

Report to the HEFCE by PricewaterhouseCoopers

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HE033398

Business model for the e-University

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Preface

This study has been a fascinating and a difficult one. Our task was to produce a business model for an e-University, a concept that did not exist, yet one which already conveyed a wide variety of meanings to different people. Both within and outside the higher education sector, there are those for whom the current paradigm of higher education is almost sacrosanct, as well as those for whom it is virtually dead. We believe our proposals steer between this Scylla and Charybdis.

There are many points on which we are clear, or fairly clear, about what needs to be done, but for which much more work is needed to find the best ways of doing it. It is in the nature of e-businesses in general that many of the solutions will only emerge in the course of trying to make it happen. The e-world does not wait for tried and tested solutions; nor must the e-university. Our higher education faces a great opportunity, but a great challenge. We are confident of its success.

Our work has been assisted by many people so far, and there are many more contributions to come. We thank them all for helping us develop these ideas – and especially we thank our Steering Group and the Higher Education Funding Council for England. Our team was:

Quentin Thompson (team leader), consultant
Keith Baker, consultant
Alistair Cromwell, PwC
Peter Gist, Arup Communications
Rebecca Rhys, Arup Communications
Andy Wolfe, consultant

assisted by Margaret Martin, PwC

Part A: Aims and objectives

A1 Background

1. The application of e-technology is having a major impact across many sectors of the economy. While this has been far from uniform, it has often led – and is leading – to significant changes in the ways in which things are done, in which goods are made and in which services are delivered. It is often not simply (or even) a matter of doing things more efficiently, it is a change in the mould.

2. This can be threatening to the traditional ways of doing things, but lessons from other sectors are clear: if traditional providers do not respond quickly and imaginatively, someone else will and traditional markets will evaporate.

3. Higher education is no exception: already there are changes stimulated by the internet and by other enabling technologies which have reduced geographical and time boundaries. The pedagogy of on-line learning is still in its infancy, but it is already a powerful tool and, used well, can increase the range and excitement of learning. Many of our universities are developing imaginative responses to the opportunities, sometimes individually, sometimes in groups.

4. Recent reports have put the size of the global market for e-learning at several billion dollars, in part due to general economic growth in countries experiencing rapid development and modernisation, and in part due to changes in demographic patterns. But perhaps most significantly, it is due to the ever growing individual and corporate interest in continuous professional development (CPD) and in lifelong learning, the requirements for which are now quite different from those of a decade or so ago.

5. This presents tremendous opportunities for UK universities, but equally they are also opportunities for others. So an active UK response is essential if we are to retain, let alone increase, our share of the global market. The markets most under threat, from a UK perspective, are often those overseas ones which produce income surpluses for universities. University funding in the UK is now such that many would find it difficult to conceive of returning to a reliance on traditional home students without the income from overseas markets.

6. The UK's traditional higher education competitors (such as Australia) are making advances in some of these markets, but so too are new competitors (from sources as diverse as the US and Finland). The main current threat is in work-related education – postgraduate, professional and CPD. In time, some of our home markets may be under threat too, not least in CPD, although the base line of traditional provision for 18-year-olds physically going to study for a degree is likely to be relatively safe – at least for the time being.

7. The competition is not only from other higher education providers. There is also a growing provision of e-based learning not only within companies for themselves (for example through some of the corporate 'universities'), but also from commercial providers to the corporate sector through global education companies. Erstwhile (passive) partners to the education system, such as publishers and broadcasters, are also turning into (active) potential competitors. Perhaps the most challenging developments are the innovative partnerships being formed between universities and commercial companies to address sub-sectors of the market – particularly in business studies. In some of these partnerships, equity investments share revenues and profits.

8. It is the advance in technology which provides the springboard for these developments. Conventional higher education provides high quality learning materials, rich in depth, to relatively small and geographically concentrated groups of students. Much of the current distance learning, on the other hand, has provided learning experiences with a wide geographical reach to students irrespective of their location, but is often static and lacks richness. In contrast, internet technology will allow the delivery of learning which has both richness and reach. It allows global access wherever a dial-up connection can be provided – already millions are on-line, and the numbers will grow exponentially in the next few years. The development of broadband technologies (with faster connections and transmission of data over the internet) will further increase the scope for richness by enabling more interactive and content-rich web experiences, with the feel more like that of an interactive television.

9. Internet access has hitherto predominantly been via a PC using dial-up services through a telephone service provider. In the future, access to the internet will be available via a choice of channels and devices. Telephone network connections will be supplemented by wireless, satellite, cable and higher bandwidth services such as DSL (Digital Subscriber Line). At the same time, the range of devices used to access the internet will expand from PCs to include mobile handsets, interactive TV and even game consoles. These developments will have a significant impact on the range and type of applications able to be offered over the internet, and will make the applications more accessible to parts of the world where they have previously been unavailable.

10. The e-University, as an idea, was conceived not so much to respond to what others were doing, but to enable the UK to take a lead in this emerging world of e-learning. To take a lead will require significant investment and will entail a fair degree of risk. It is clear that the brand created by the e-U must have a high impact on launch and then sustain and grow it.

A2 The challenge for the UK

11. Many individual UK HEIs are already developing some form of e-learning, particularly the Open University (OU) which is in the vanguard of some of these developments. But few so far have taken full advantage of the new technologies – not least because of the high level of investment needed. Some imaginative developments have also been made within the corporate sector, often for their own training purposes. The high investment costs have encouraged HEIs to form partnerships, with each other and with for-profit companies, to develop initiatives. There are many ways to build on the strengths and capabilities of for-profit companies and educational institutions, and we fully expect a growing number of

universities to partner with for-profit companies as e-learning develops. Examples of e-initiatives in higher education are given in Annex 1.

12. The challenge for the UK is that the e-U must be an entity that will be different from, as well as 'better' than the other current offerings: 'better', not only in terms of the offerings it makes available today, but also in terms of being proactive for tomorrow's needs. The e-U must capitalise on the UK's strengths, knowledge, reputation and experience and exploit the opportunities provided by the 'new economy' technology and by the rapidly expanding markets. The concept has to work for a future that is uncertain, which means that flexibility must be inherent in the design. The e-U must be able to respond to demands and adapt in advance of others and so stay ahead. Such flexibility needs to embrace not only its offerings, but also the very structure of the e-U itself.

13. To take a global lead, the e-U will need to grasp new ideas in imaginative ways - even though some of them will be risky. The design will not be right if it does not generate excitement. On the other hand, it will also generate some scepticism, if not hostility. In our suggested design, we have produced a reasoned proposal which we hope retains the excitement, but minimises the concerns.

14. One point we must emphasise. There are still many issues needing to be addressed as the e-U moves towards implementation, and some can only be addressed as the e-U itself evolves. At a number of points in this report, we have set out what the e-U needs to do but not how it should do it. In the time so far we have developed the vision. There is much more work needed to make it a reality – and some of the issues have been bedevilling HE in the UK for many years. But we firmly believe that the new world of an e-U provides the incentive as well as the means to address them successfully. We recognise that the task will not be simple.

A3 Aims

15. The main aim given for the concept of the e-U is to provide the opportunity for the flagship provision of UK higher education excellence using digital channels, primarily abroad but also at home. Our interpretation of 'excellence' is that it should mean 'excellent fit for purpose': each e-U offering must be the best of its kind and best suited to its target market.

16. The result should be an expansion of the UK's overall share of the global overseas markets for higher education; an expansion which builds on, rather than substitutes for, current UK provision as far as possible. In our proposed design, the benefits to UK HEIs are that each one would be able to contribute to the e-U offerings (subject to quality conditions), and would have financial and other help in doing so, and that all would also benefit from a general expansion of the UK presence and profile overseas.

17. Within the UK, a second aim for the e-U is to support and promote the expansion of lifelong learning at higher education levels, particularly in the form of continuing professional development. But it also offers a means to help increase social inclusion. The concept of e-learning, as a development of distance learning, will provide opportunities for learners who otherwise would not be able to take advantage of higher education (such as people with certain forms of disability). The e-U should help to provide access for such groups.

18. In addition to these external aims, there is a third, more institutionally focused aim. Experience suggests that the development of e-learning will require significant modifications to the traditional paradigm of the supply of higher education. Furthermore, the production of high quality e-learning can be very costly. Thus the aim is that the e-U concept should encourage and facilitate new thinking within UK universities and help them develop and made imaginative use of the emerging e-learning technologies. Again this should be of value to all UK HEIs. The e-U must show, by its example, that online learning can, and should, be of high quality while also being interactive, flexible and exciting.

A4 Objectives

19. Underpinning its aims, the e-U will have a series of objectives. To help establish these, we draw lessons from the impact which e-technology has had on other sectors, as well as from developments already taking place, especially in the US, in e-learning in higher education.

20. One of the clearest effects of e-technology is the shift it produces in decision making and the power of choice, towards the consumer and away from the provider. This is as true in e-learning as in other e-businesses. It has already been demonstrated in recent demands of some corporate consumers, as Scottish Knowledge can testify. There is a similar trend for individual students. Thus the first objective of the e-U is that it should be **'learner-driven'**, responding to, or preferably anticipating, reasonable requests from a range of potential consumers – be they other universities, governments, corporate firms or individuals.

21. The second, related objective is that, to be learner-driven, the e-U must be highly **responsive to changes** (in demand, in supply and in technology), and should develop, where possible, in anticipation of them. This is because, especially in the e-world, it is difficult to predict demand, which means that it is not possible to use traditional approaches to planning as there is simply too much uncertainty – and hence risk. Certainty about demand would be unusual – although not always impossible, for example if there were a prior deal with a bulk consumer such as an overseas government or a multi-national company. As some form of counter to this uncertainty, in education good supply can lead to increased demand, although this has its risks too.

22. We recognise that, in the early stages of its operation, many of the e-U offerings are likely to be fairly supply driven and also provided by a single university. But the facility for the e-U to have the flexibility to respond to changes in learners' future demands must be inherent in its design.

23. A third objective is the need for everything that the e-U offers to be **excellent** in terms of having **excellent fit for purpose**. This will require the operation of a mechanism which any potential e-U offering will need to satisfy. The check for excellence itself will need to be speedy and relevant to context. Excellence interpreted in this sense will mean that the e-U can, and should, be relatively inclusive for UK HEIs in terms of the types and sources of offering which it makes available.

24. A fourth objective, and another sense in which e-U offerings should be excellent, is in the **use of new technology** – not for its own sake (although that will be a marketing requirement), but because embracing technological innovation will enable new kinds of

learning experiences to be delivered. This will create a position of strength for UK higher education, enabling it to shape partnerships and manage the competition rather than being defensive.

25. The application of the new technologies is expensive – not least in the development of e-materials. Thus a fifth e-U objective should be to secure **economies of scale** – in three senses. First in terms of target markets, to justify the levels of investment needed, there should be a reasonable expectation of a high volume of demand before a significant investment is made to develop an offering. Second, economies of scale in development costs could be secured insofar as learning materials were developed in 'component' form so that some components could be re-used in more than one set of material. Third, there would be benefits to individual HEIs in using a common technology platform and e-tools framework and so sharing development costs, experience and expertise.

26. A sixth and final objective is that the e-U should, over time, become **financially self-sustaining.** In the light of its aims, we do not think the e-U should have profit maximisation as an objective. To be a flagship requires a breadth of provision which may not all be profitable; and wider intentions to increase social inclusion and to disseminate good practice do not sit comfortably with a focus on profit maximisation. Of course most aspects of the e-U's operations will be profit maximising: its management style should certainly be performance driven (see section B8), and it will need to make surpluses so that it is not wholly dependent on external funding for re-investment.

27. One cautionary note on objectives is that there is the clear risk that the successful operation of the e-U could impact on one or more existing markets for some UK HEIs. It would be disingenuous to deny this. However there are two counterbalancing points. The first is that our suggested design for the e-U is an inclusive one, which would enable any UK HEI to make a proposition for consideration. The second is that all such markets are at risk anyway, if not from the e-U then from other universities and other providers.

Part B: The business model

B1 The basic concept

28. The e-U business model must be adaptable in concept, in structure and in the offerings which it makes available. It must evolve, respond to and, as far as possible, anticipate changes in its environments – be they the demand markets, the availability of supply offerings or the technology. Despite this, the design must be simple from the learner's perspective, even if the underpinning is complex. In this section, we summarise our basic proposals for the e-U and then elaborate them in subsequent sections of Part B.

29. We suggest that the e-U should be viewed more as a facilitator than as a 'university' in any traditional sense. It should enable learners to learn, providers to provide and awarding bodies to award, in ways which meet their (joint) requirements. But it should couple the provision of facilities to enable this to happen with the drive and energy to make sure that it does. At least initially, we suggest that the e-U should not award its own qualifications, nor provide courses on its own. It should enable others to do so (and not just HEIs) as long as the provision is excellent fit for purpose, operates within a defined technology platform and meets a market demand. However, we think the e-U should operate under its own brand name (see section B12).

30. Our basic proposal for the concept is that UK universities – and other bodies – would produce and make available through e-U facilities, blocks of learning materials in the form of courses and modules, and a range of tutorial support services. The blocks would be relatively self-contained from a learner's perspective and would be structured to enable them to be assessed. We use the term 'module' to refer to the smallest unit of study which a learner might wish to take: full courses should be structured into such modules. The learning material itself would be produced in ways which took maximum advantage of current technology. It would be built with a high level of embedded interactive tutorial support, sufficient, as far as possible, to enable learners to use the material with little, if any, further external support.

31. Some providers of e-U learning modules and courses will wish to provide additional tutorial support for their material, over and above what they had designed into it. Others may explicitly not wish to do so. We would expect there to be providers of tutorial support, from universities and from elsewhere, who would offer additional tutorial support more widely than for material which they themselves had produced. This happens to some extent already within the UK, and even more so in the US.

32. The e-U would use a small committee to ensure the academic excellence of its products and services, comprising individuals selected for their acknowledged expertise in all aspects of teaching and learning, and drawn from universities and colleges which themselves have an international reputation. This 'committee for academic quality' would produce design criteria which defined excellence both for learning materials and for tutorial support services. It might operate through a series of small, often ad hoc, panels to help it review propositions.

33. We can identify four main modes of operation for the e-U. First, and most conventional, would be for UK universities to convert some of their awardbearing courses into e-learning ones, but maintaining the same course structure, and then to make them available through the e-U to potential learners, perhaps supplemented with their own e-based tutorial support. To receive their awards, some universities might make it a requirement that learners made use of their tutorial support as a supplement to their learning material.

34. A second mode for the e-U's operation would be that some UK universities might agree that certain aggregations of modules, some of which would be their own, some those of others, would be eligible for their awards. These aggregations might be pre-specified or could be negotiated with potential learners. Over time, this might lead to the development of a system of credits. In either of these two modes, the university making the award would be responsible for ensuring the coherence of the learning programme leading to the award.

35. A third mode would be that other bodies (such as overseas universities, governments or companies) might use one or more modules from the e-U, perhaps adding their own provision and providing their own awards or certificates. We think that this prospect of combining e-U with local provision may offer a particularly attractive market opportunity.

36. A fourth mode would simply be that individual learners might study an e-U module or course with no intention of seeking a qualification.

37. Potential learners would be faced with an array of learning opportunities from the e-U which would range from full courses with a qualification to single self-standing modules – together with a further range of tutorial support services. The offerings would be described on a user-friendly database. But we have no doubt that many potential learners would need further human assistance to help them choose a programme of learning which both suited their needs and was academically coherent. For both these purposes, we propose the concept of a 'navigator' who would act as an intelligent interface and adviser for potential and actual learners.

38. An important role for the navigator would be to simplify the search process and to advise and guide learners' choices in terms of their suitability and coherence – whether or not the learner was seeking a qualification. For those learners who were seeking an award, the navigator might also assist them with programme selection and then help identify, and perhaps even negotiate with, universities (or other bodies) which might agree to make an award for that programme. We recognise that there may be difficulties with this.

39. Based on its assessment of market prospects, the e-U would drive the business forward by actively seeking the development and creation of new products and services in which to invest, sometimes competitively and often from consortia. It would not normally invest in duplicate modules or courses unless they were clearly different and aimed at different markets – although it could still provide a platform for modules in which it had not invested (subject to excellence). Each investment would be subject to a prior investment appraisal, and the product would need to satisfy the excellence criteria mentioned above. The balance of investment made by the various parties would reflect the agreed balance of risk and would be reflected in the subsequent distribution of relevant income.

40. Variable fees would be charged to consumers for the use of specific learning materials or services. These would be paid by learners themselves and/or by other users of the provision (such as governments, companies and other universities). Other revenue sources would include advertising and e-commerce.

41. In summary, the e-U itself would undertake:

a. The active development of the business by identifying future opportunities, by securing block procurement, if possible, and by negotiating contracts.

b. Encouraging and/or commissioning and assisting with the provision of appropriate products and services from various sources – separately or in consortia.

c. The operation of a mechanism to ensure the excellence both of learning materials and of support services, covering content and form.

d. The development and provision of the underlying technological platform.

e. The operation of a navigator role, initially as an integral part of the e-U.

f. Branding and marketing for the e-U, and hence for its providers, for the products and services.

g. The provision of supporting administrative functions.

B2 Markets, courses and modules

42. The starting point for the provision of content through the e-U must be where the UK system is now, using whatever materials are suitable and currently available, or could easily be made so. At present, each UK higher education institution offers its own courses which it fully supports and for which it offers its own awards. That model is the starting point for the e-U and may remain a core component of its operations. For such provision, the e-U's role would be to specify the requirements for the material to be interactive e-learning provision; it would also make investment funds available to help with production, provide the technology platform, and help with marketing. This would have some similarities with the current operations of Scottish Knowledge.

43. Of course institutions could provide such programmes without reference to the e-U – as long as they had access to sufficient funds to develop their material as e-learning in the first place. For some specific programmes aimed at large and reasonably wealthy markets, such as for business studies, this may well be possible. Indeed it is precisely for such markets that most effort has been devoted hitherto.

44. In other areas, but in business studies too, we think there could be a clear advantage to UK HEIs in making use of the e-U's facilities, for example for: development funding; its technological platform and the use of its e-tools; assistance with market intelligence and marketing; and help to reach markets which they could not reach on their own. To illustrate the point, one report estimated that the development of an e-learning course (undefined) costs around $1 million. The figure is not specific and only refers to developing the course into a suitable format for the web. It does not include the costs of building the technology platform. The order of magnitude of the costs provides a further compelling reason for HEIs to join a club like the e-U. Additional reasons include: the promotion of a global brand, shared marketing outlay, and the sharing of experiences and expertise between HEIs.

45. Pre-structured full courses, leading to pre-defined qualifications, may represent much of the demand for undergraduate degrees through e-learning. However the current level of demand for undergraduate e-learning is not yet great and is not predicted to catch up with the growth of some other markets.

46. Initially, the e-U needs to focus on markets for which it is reasonable to suppose there would already be significant demand and/or for which there is reasonable confidence that demand will grow. As discussed more fully in section B11, the main markets are likely to be in careers-associated areas such as some postgraduate and/or post-experience areas, and particularly various forms of continuing professional development (often for corporate consumers, but also for governments, other bodies and individuals). Potential learners may or may not expect such provision to lead to an award from a UK institution.

47. To illustrate the possible range, the following are illustrations of the types of demand that we think the e-U will need to consider, in addition to the more traditional courses:

a. A multi-national corporation that wishes to access a range of case study materials to form part of its own in-house training for top management.

b. A professional body of lawyers in Brazil that wishes to use a module on European law as part of its professional updating.

c. A regional government in China that wishes to use a few modules from the UK in the development of its new teacher training programme, perhaps with a prior module in English as a second language.

d. Busy computer programmers (anywhere) who wish to add to their CV with certificates in the most recent information technology applications.

e. Professionals in highly regulated industries who need support for their own professional performance.

f. Retired individuals in the UK who wish to learn about twentieth century musical development in Western Europe, just for fun.

g. Individuals in Singapore who wish to package their own business studies course with modules from a range of sources (UK and elsewhere).

48. These are only hypothetical examples, but they illustrate the types of provision which the e-U should be able to make available. It must be able to respond easily and quickly to such demands, with a facility built into its design from the outset. The examples also illustrate that it will be important for the e-U provision to be sensitive to local cultures and language.

49. We noted above that many HEIs may, initially, wish to make available only aggregations of modules which make up an awardbearing course. But some corporate (and other) consumers are already seeking access to learning units of less than a whole course, and some are not interested in an award in any case. Short executive courses, drawn from parts of an awardbearing course, are one of the fastest growing and most profitable activities in some US universities; and the trend in company training is to construct personalised learning interventions from ever smaller modules. The e-U arrangements must be able to make such provision.

50. To provide this level of flexibility, the e-U will need to make available self-standing 'modules' of learning provision, where the size is determined by reasonable demands from

the market. Such modules could form part of a fuller course leading to an award or they could simply be self-standing units prepared for a specific market. The e-U would enable potential consumers to select modules, either separately or in combination, which suited their needs – albeit with guidance about their coherence and about the possibilities for an award (see section B5).

51. The question of the 'size' of the smallest unit of study which should be made available to prospective consumers is not simple and, to some extent, will be determined by demand. If the e-U were only to offer whole courses leading to a predetermined award, the question of size would not arise. Suggestions for the range of module size (as stand alone or as part of a course) might be part of the design criteria set by the e-U. The maximum size might perhaps be the equivalent of about a half-semester of study, but many individual modules would be smaller than that. (The smallest unit of study available to learners is not the same as the smallest unit of production: see section B3.)

B3 Content design, production and procurement

52. There is already learning material which incorporates multi-media provision of lectures, demonstrations and background material. But the next major step forward is that the technology now also allows a high degree of interactive tutorial support and student choice to be built into the material itself – sufficient for it be self-standing with little or no further tutorial support. (It could be thought of as an e-version of programmed learning books.)

53. We think the e-U should require all its material to build this high level of interactive tutorial support into its design. This should be specified as one of the e-U design criteria. It would set e-U material apart from that of most others: there are very few examples of the use of new technology in this way in higher education – not least because it is very expensive to produce. Some leading corporate e-learning companies are integrating tutorial support into their material in this way, which may well fuel learners' expectations for the future. For example, one of the companies at the forefront of interactive e-learning, Ninth House Network, has course modules for businesses which use a comprehensive e-learning approach. They provide interactive, cinematic learning experiences to accelerate the learning process, and the technology enables individuals to interact, learn, and apply new skills at their own pace and receive immediate feedback, all on-line.

54. Each e-U module should have provision for self-assessment, and perhaps practice elements, built into its structure. This would be valuable for learners who wished to check their own progress – irrespective of whether they sought a final award or not. Again we suggest it be an e-U design criterion that such assessments should be built into all modules.

55. Each learning module would also need to be assessable externally, and an indication of the form and nature of such assessment should be built into its design. This would assist bodies or institutions – other than the original designers – which accepted the module as valid for their award and which wished assess their own learners.

56. There are organisations which currently offer to arrange assessments under contract, for example the British Council and some commercial companies (such as Sylvan). There are also companies which specialise in the design of assessment in e-learning. The

e-U might wish to set quality requirements for relevant suppliers and keep a register of those which satisfied them.

57. The e-U specification would also need to include a template for the technology-based learning environment. All material (and services) should use open web-based internet technology (rather than proprietary platforms), with the learning environment specified in order to ensure coherence and consistency in presentation. E-tools to design the material might also be specified – or at least the technological base used by designers would be required to be consistent with an e-U technical standard. We would see advantage in the e-U making available a set of e-tools and services to help designers meet these standards.

58. In this sense, the e-U would act as an Application Service Provider (ASP) for course providers. Where possible, the tools and services should be accessible via the internet on the central e-U platform. Learning material providers using them would then be confident that the learning materials they developed would be consistent with the quality procedures of the e-U. The e-U might co-fund, with private investors or providers, research and development into such aspects of software development, in order to ensure that it at least keeps up with the competition.

59. To develop material in the way we propose requires subject expertise to be combined with a range of skills associated with instructional design. The development process is time consuming and expensive, which is one reason why e-U resources would be helpful to UK HEIs. Partly to help economise on development costs, increasing interest is being shown in the concept of re-usable 'learning objects' defined as the grain size of the smallest unit of production within learning material (as distinct from the modules as the smallest unit available to learners). Once developed, the e-U could provide a repository for such objects and make them available (on terms) to designers of new material. This concept of content asset management is explored in more detail in Annex 3.

60. The design of the learning material should also make use of 'software agent technology' which would provide event-driven processes that could monitor the actions of the learners in order to provide context-sensitive tutorial assistance. Learner support of this form should be built into the design process and could include the use of text, audio or video responses.

61. All the above criteria would be underpinned by the e-U's insistence on excellence for all products and services which it made available. It would not be the source of materials which would provide the assurance of excellence, but rather the fact that they had been subject to an e-U check in a way which was globally recognised as ensuring excellence. In fact, we suggest that any source organisation (HEI, public or private), or a group of individuals, should be able to use the e-U's platform to provide modules (or services) as long as they satisfied the design criteria and this requirement for excellence – whether or not they were products in which the e-U had an investment stake.

62. To achieve widespread recognition of excellence, the e-U needs to have a process which would be nationally and internationally recognised as providing such a guarantee. We suggest that national recognition would best be achieved through a process designed and operated by a limited number of individuals selected on the basis of a national reputation for their experience and expertise in all aspects of teaching and learning. For the international recognition, we suggest that each such individuals should also have the backing of their own

university which, in turn, should have a global reputation for excellence in its own right – excellence again defined widely as before.

63. We suggest that universities should be invited to nominate individuals who satisfy the above criteria to form a committee for academic quality. In making nomination(s), each university would need to agree that, if its nominee(s) were accepted, it would lend its name to support the process for excellence that the committee subsequently designed. By being 'associate brands', these would help the initial credibility of the e-U brand itself. We trust that this would only be needed in the first few years until the e-U had established its own reputation for excellence; the committee for academic quality would then evolve into a committee of the e-U itself.

64. The task of the committee for academic quality would be to design and then operate the mechanisms to assure excellence for each module. The process would need to be speedy: it will already take some while to develop new modules, and further delays should be minimised.

65. As the e-U concept is not an electronic version of a conventional university, the committee for academic quality would need to develop a quality assurance process for the learning modules based on a new paradigm. We would expect the main approach to be to quality assure the process used by suppliers themselves when developing the modules – for which the committee might define a quality management process. For example, the committee might require evidence of active contributions from subject, pedagogical and learning technology specialists. We outline a possible approach to this in Annex 2.

66. In addition to specifying an active quality management process for the production of modules, the committee for academic quality would conduct a peer review check of the final product. This could be done by means of a small expert panel set up for each product, reporting to the committee, and consisting of, say, five people chosen for their appropriate expertise (along the lines of the RAE expert panels, but including the full range of appropriate expertise, not only in the subject matter). This final review would be electronic and should take no more than 2-3 weeks. Subsequent evaluation of the pedagogical effectiveness of learning programmes (and modules) in practice could only follow from longitudinal data on their use and results, and from student feedback. The e-U might commission work to help with such evaluation.

67. In summary, we think that excellence can only be achieved with coherence if there are strong central guidelines; without such guidelines, there is a risk of degenerating into chaos. To achieve sufficient coherence, we think the e-U should specify the design criteria within which potential modules would need to be developed, covering the above points. That is: all courses and programmes would be structured into smaller modules, each of which would be subsequently available for incorporation into other learning routes; as much interactive tutorial support as possible should be incorporated within the module design; each module should be assessable, with an indication of the ways in which assessments could be made; modules should be designed so that they could be received electronically by the learner and with a technological compatibility set by the e-U's definition of its learning environment.

68. We anticipate three different bases for the procurement and/or production of the products: materials could be procured from a provider, paid for and owned (including the intellectual property rights – IPR) by the e-U itself; they could be produced as a result of a

joint investment by the e-U and a provider; they could be produced by a provider with no e-U investment. Income arising from those procured on the first basis would belong to the e-U; on the second basis would be shared, perhaps pro rata according to the levels of investment made; and on the third basis would be passed to the provider with some form of e-U handling or fee charge. The provision of any materials (including those made available under e-U auspices but without e-U investment) would include, within the contract, agreement as to how they were to be updated – in content and technologically.

69. At least initially, we would expect the first and second bases to be the norm as we suspect that there are very few suitable learning packages already available as interactive e-learning and in appropriately digitised form. We suggest that the e-U should make available (at a charge) the e-tools and some support to help develop and/or convert existing material. The provider would sometimes be one HEI, sometimes a consortium of HEIs, sometimes a joint HEI/private sector arrangement, and sometimes even a group of individuals or academics. In time, we would expect organisations other than HEIs to be providers too.

70. The e-U would decide its own approaches to determining the materials in which to invest (on any basis). This may or may not be through competitive tender but there would be a clear expectation that the e-U would ensure that it secured good value for its own investments. The e-U would seek module development in areas selected on the basis of its analysis of market prospects.

71. We would see advantage in the e-U making available more than one set of material for any one topic, as long as each was demonstrably different and, of course, each was excellent in the e-U's terms with respect to its targeted market. However it would be unlikely that it would wish to make significant investments of its own in overlapping sets of material.

72. Any group (HEIs, public or private organisations, or even a group of individuals), would be able to make proposals to the e-U seeking investment in the development of material as long as it satisfied the design criteria and passed the test for excellence. An e-U decision to invest would primarily be based on market and value for money considerations, but would also take account of its wider objectives, as set out in Part A of this report.

B4 Learner support

73. The more that new technology is used to build tutorial support into the design of learning material, the less would be the need for additional tutorial support. Indeed this is almost a trade-off, as both types of support are expensive to provide. We turn now to the question of the provision of additional tutorial support.

74. There is evidence that tutorial support, in any form, can be a strong motivator for students – especially for those on long courses. But there is also evidence that it is less important for more mature students and particularly for those undertaking career-oriented study. For the latter, flexibility of provision is often more important than regular tutorial support. However, much of the evidence available so far pre-dates the use of new technology to build sophisticated interactive support into the learning material itself.

75. We have already proposed that e-U material should have as much interactive tutorial support built into it as possible, so that students could have the option of not needing to draw

on any further external support. Users such as other universities (UK or overseas), multinational companies, or governments and government bodies may wish to add their own tutorial support for their learners using e-U modules, especially where such support needed to be specific to local circumstances. Such users, and others, may also wish to secure additional tutorial support from a range of sources.

76. Nevertheless, individual learners may often seek to supplement e-U learning material with mediated collaboration with a level of tutorial support. In addition to whatever support they might be able to obtain locally, the most obvious source would be from the subject experts who contributed to the design of the material in the first place – an arrangement which Scottish Knowledge normally expects from its providers. But some material designers may not be able, or may not wish, to offer such support – and it is well known that experts in subject content are not always so skilled in providing tutorial support to learners.

77. We think that it should be a role of the e-U to ensure that excellent tutorial support was available over the internet – even if only in 'chat' mode – to meet the demand for it. Such support would provide tutorial help to learners and would help them evaluate their progress and chart their understanding over and above the self-assessment within the module itself. This is discussed in more detail in Annex 3.

78. Universities already provide this support for their own learners and would normally require any learner seeking their award to avail themselves of it. There may well be universities, or even companies, which would be willing and able to provide, on a fee charging basis, specialist tutorial support for material produced by others. There is already a growing tendency for education providers (universities and others) to make use of materials produced elsewhere and provide their own tutorial support for them (for example, the use of Harvard case studies).

79. There are also commercial providers which offer such support, at least in the US. For example, SmartForce offers on-line one-to-one support to complement its courses which is available 24 hours a day, 7 days a week (known as '24x7') and in real time. Students also have access to topic-specific chats, e-mails containing relevant questions, help desks, on-line labs (where applicable), and on-line assessments which also provide direction.

80. A novel approach is offered by Tutor.com which provides education referral services on the internet. Independent tutors and instructors register on its National Registry, which provides support to tutors and referrals and a proof of background check to students seeking tutors. Learners can search a database of more than 18,000 registered tutors in about 400 subjects on the basis of multiple criteria. These can include subject, hourly fee, teaching philosophy, academic and teaching qualifications, and reviews from previous students.

81. Under the auspices of the e-U, providers who wish to make support services available would be expected to provide support electronically and on-line – not least to be able to offer the 24x7 service that would normally be required (which would be difficult for a single HEI). They would need to specify the subject area(s) and the language(s) they were able to support.

82. We would not expect face to face tutorial support to be a normal part of the e-U provision. Current expectations of the need for it are not based on the high level of interactivity which will be a key feature of e-U material. Hence face to face tutorial support (as opposed to on-line support) should rarely be needed, although there will be exceptions. It

is also expensive and difficult to provide. Nevertheless, in some locations there may be merit in there being some form of local presence, for example to provide space, equipment or a meeting place. This would depend on the local environment. Decisions on the level and nature of such local support would need to be made on a market by market basis.

83. As a facilitator, the e-U would not directly provide the e-based tutorial support itself, but should ensure that there was sufficient available to meet demand. The volumes required cannot be known with any certainty in advance and there will clearly be risks for potential providers (as for any service industry operating in uncharted territory). There may be a need for some form of risk (and revenue) sharing with the e-U itself – as we propose for material development.

84. For such learning support services, the committee for academic quality would develop criteria for excellence and would review proposals from potential providers against those criteria. These would cover not only the quality and relevance of the proposed individuals, but also the nature of the services offered and the mechanisms by which the proposer was intending to obtain and react to feedback from learners. In the same way as for the check on the excellence of learning materials, the committee for academic quality might set up small ad hoc panels to help with such reviews. Again the process should take no more than 2-3 weeks.

85. Most student learning experiences benefit from peer group interactions between fellow learners. As long as there was a roughly contemporaneous peer group, this could be arranged electronically, for example through chat-rooms, bulletin boards or 'threaded' conversations. The cost of such provision is likely to be low, and could form part of the technological infrastructure of the e-U itself.

86. Finally, learners will need access to support material such as is traditionally supplied through libraries. Some universities already provide this for their own distance learning students and might be prepared to extend this service, for a fee, to students taking modules through the e-U (whether they were the providers of the modules or not). Some of the JISC projects may help with this, and the work of UKOLN is aimed at making more such material available on-line. There are many commercial providers of such material, mostly based in the US.

87. There are already numerous on-line libraries operating on a commercial basis. The sites typically offer students access to hundreds of thousands of books, journals and periodicals, as well as tools to navigate through them. Many of these sites have developed search engines and research tools that create linked references between digitised books and journals in the collection.

88. As an example, Questia plans to start next spring with a goal of providing 250,000 books on-line in three years. It recently secured $90 million in equity financing – the largest private investment in the education industry to date – which it is using to digitise college libraries. It also has agreements with 90 publishers for the digitisation of content. Publishers receive payments for each page view that their books or journals receive. A full-text search function will be free and available 24x7 over the internet.

89. Concentrating more on journals, XanEdu has access to 60 years of academic content from more than 8,000 different publishers. It will offer a search engine for students (on a

subscription basis) to access content from thousands of journals, magazines and newspapers. XanEdu will also offer digitally based CoursePacks to instructors to provide them with access to articles from journals, periodicals and newspapers which would allow them to package material for their students.

90. However, copyright problems are likely to remain difficult and we would expect a component of the learning material modules to include some form of study pack as well as references to suggested books. There are also providers of supplemental content in the market.

B5 Coherence and awards

91. One of the most important characteristics of a learning experience is that it should be intellectually coherent – as well as excellent. The excellence of its individual offerings would be the direct responsibility of the e-U itself as outlined above. Given the proposed nature of the e-U as a facilitator, the ultimate responsibility for ensuring the coherence of a programme for those learners seeking an award would rest with the awarding body. However in all cases, whether seeking an award or not, learners would be offered help to achieve this coherence by the e-U itself (see section B6 on the role of the navigator).

92. In the early stages of the e-U, many UK HEIs would be prepared to make awards only to students who had taken a pre-structured programme of their own e-U modules and with their own support. Coherence would thus have been secured by the institution at the outset.

93. But the possibilities provided by the e-U concept are much wider than that. For example, other organisations, including other UK HEIs, may be willing to make an award on the basis of an aggregation of modules drawn from a range of sources, perhaps not all of them from within the e-U. Although some UK HEIs already do make use of modules and materials from other sources, as do some professional bodies, such aggregation is difficult in the UK due to the quality assurance requirements of HEIs.

94. It is difficult in the US too, and the problem of 'articulation' has limited the growth of flexibility there. Individual institutions seem to exhibit a general resistance to giving up control of their curriculum and a reluctance to accept courses from other institutions which might be viewed as a substitute for their own. Further, attempts to compile a database to enable this to happen seem to require disproportionate amounts of time and technical capacity, although Phoenix seems to have managed it. One approach in the US has been to try to develop a competency-based approach to learning (using outcomes rather than inputs); for example the Western Governors Union model uses the concept. This has not been popular with academics.

95. Nevertheless there are ventures which operate with material drawn from different sources. Fathom is an e-learning portal which offers a combination of courses from different sources. The Electronic Campus of the Southern Regional Education Board (SREB) brings together programmes and courses across the Southern region of the US. Credits earned in courses offered through the SREB are transferable, although the decision is governed by the college or university to which the credits are being transferred. The Global University Alliance (GUA) is a consortium of nine universities which cross-accredit courses. It has

partnered with NextEd to use its platform to deliver its courses over the internet. However progress is slow in the US, which may present an opportunity for the UK.

96. We think that the flexibility of taking modules from different sources to aggregate into one institution's award, perhaps even into a degree, will be a natural consequence of the growth of e-learning over time. As e-learning develops and this process evolves, it could lead to the development of a system of credits and credit accumulation.

97. We think that imaginative ways should be sought to remove the current impediments to aggregating modules from different sources into a single award. There may be lessons which could usefully be drawn from historical models, such as the University of London External or the Council for National Academic Awards (CNAA). One solution might be to augment the role of the e-U's committee for academic quality to the level where it was nationally accepted as providing sufficient quality and coherence safeguards of its own. If the point could not be resolved in other ways, the e-U might be provided with powers to make its own awards, perhaps as an awarding body of last resort. It is also possible that the market may start to look for e-U qualifications in their own right.

98. Apart from UK HEIs, there are other bodies which might make awards using e-U modules, such as overseas universities, overseas professional bodies and commercial companies. Any one of these may also wish to add their own learning material and/or support to whatever materials they used from the e-U (for example by providing and assessing their own local teaching practice). We see the potential for such 'e-U plus local' combinations as particularly attractive in possible deals with overseas governments in developing countries – or indeed with multinational companies or overseas universities. Such arrangements would need to be brokered, a facility which the e-U should offer as a value-added service.

99. Unless and until the e-U had its own awarding powers, any award would be the responsibility of the institution or body that was making it, and not that of the e-U. Thus it would also be the awarding body which had the responsibility for ensuring that the learners' total experience was coherent in their terms. The ultimate responsibility for coherence would not, indeed could not, be that of the e-U – unless it was the awarding body itself. Any body making an award in this way would be subject to whatever quality and coherence checks were required within their own local regulatory arrangements (for HEIs within the UK these would be by the Quality Assurance Agency for Higher Education).

B6 Learner choice and advice

100. We have already noted that some companies are requesting the combination of modules from different sources and that individual learners can be expected to express similar demands soon. Assuming that the array of learning opportunities grows in the ways which the e-U concept would allow, it will become increasingly difficult, and potentially confusing, for prospective learners to choose the right learning route in a way which ensured the suitability and coherence of the route for their needs.

101. To some extent, 'coherence' for individual learners would depend on their purpose for the experience. If the purpose was to obtain a qualification, then the awarding body would ensure there was coherence. If the aim was not to secure a qualification, there would be no such external check on coherence – although the design of each module should make clear

any pre-requisites for its study. Nevertheless individual learners would still be able to make their own choices.

102. To help them make choices, the e-U would operate a database in which the modules and various supporting options would be described and indexed in a learner friendly manner. Some companies provide electronic performance support systems (EPSS) to support employees' training programmes in this way and these could form part of the e-U's learning management system. But while sophisticated course selection tools could help construct a coherent route for a learner, some prospective learners would still find it valuable also to have a human being to advise them. We refer to this role as a 'navigator', the need for which would grow as the e-U's range of offerings itself grew.

103. The navigator role could include the counselling of prospective learners for whom the e-U had no suitable materials, advising them about their preparedness for study by reference to their prior qualifications, experience or ability to cope with the language. The navigator might also offer testing services to help learners assess their readiness – and perhaps their aptitude – for a learning module or course. (Learners might also be offered a short free-trial period for them to assess suitability.) The navigator's advice could include suggestions about prior course(s) – for language, or for content in linear subjects. Such advice would not form a pre-requisite for access to e-U material, as learners who insisted on proceeding despite advice would not be excluded.

104. However the core function of the navigator would be to help prospective learners to design a learning route which was coherent and which suited their needs – including helping them to assess their need for additional tutorial support. The navigator would have tools to search the e-U repository of learning materials and services, and would advise about sequencing and coherence between different modules and about the likely pace at which a learner might proceed. Again the navigator's advice would not be mandatory and learners could, for example, choose to access learning materials but arrange their own additional support locally.

105. For those learners seeking to secure an award other than a pre-determined one, the role of the navigator could be especially valuable. Awarding bodies of whatever type will necessarily consider some routes as valid for their qualifications and others as not valid. For learners seeking a qualification, a vital role for the navigator could be to help construct a coherent route that might be acceptable to an appropriate awarding body. The navigator could suggest an awarding body and could even offer to try to negotiate with it acceptance of the learner's preferred route.

106. Depending on demand, the role of navigator could extend to other forms of assistance for topics associated with learning. These might include helping potential learners identify possible sources of financial assistance, providing access to other sources of materials, and helping to bring cohorts of students together. The more such services were expanded, the greater the scope for generating additional income for the e-U.

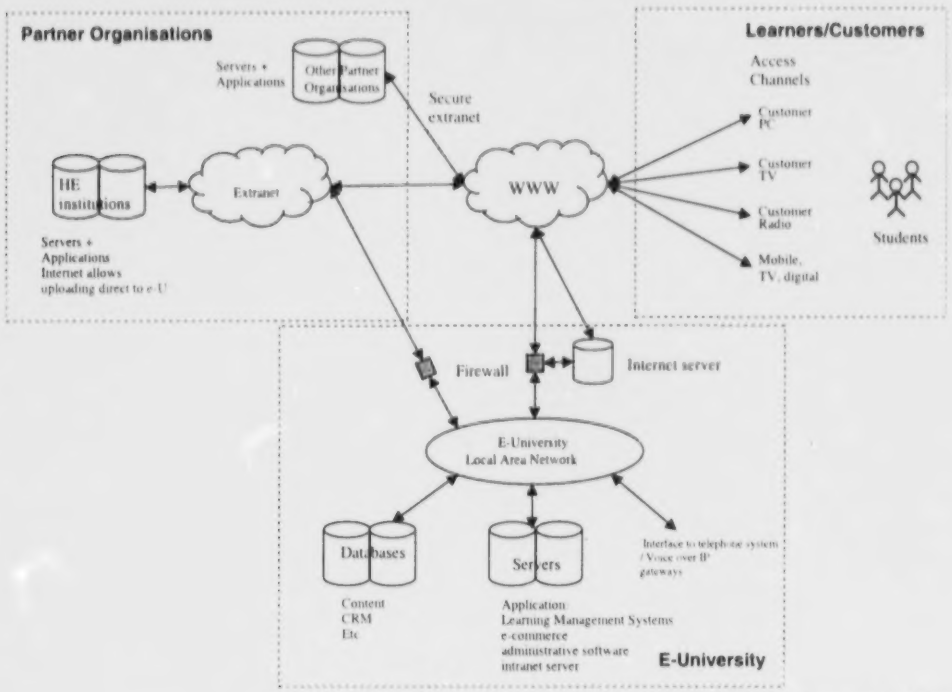
107. We would expect the costs of the navigator service to be met by the learners whom they assisted – not least because many consumers will not wish to use the service. We propose that the navigator service should initially form part of the e-U itself. It may need pump-priming funds to get it off the ground.

108. The role of the navigator would increase in importance as the e-U evolved. Different navigators could arise to specialise in different fields and/or different geographies (as have guides for non e-courses). There might be advantage in having a degree of competition. Should this happen, we suggest that the e-U might cease provision itself and regulate or license navigators to ensure consumer protection.

109. Once a learner had an agreed study route, the role of the navigator could, in theory, cease. However, many learners will wish to have access to further such advice during their studies in an iterative way and so we would expect there to be continuing contact between student and navigator. From the e-U perspective too, it would be valuable to keep track of learners' progress and of their choices in that progress – not least to help the e-U to evaluate its own offerings.

110. Learners would need to 'register' with the e-U (as well as with the institution(s) from which they were receiving services, assessments and/or awards) – not least in order to pay their fees. These data would provide the e-U with a valuable database of learners for alumni or other commercial purposes. The e-U's administrative system would need to be able to handle seamlessly the links to the students and to the other bodies with which they were dealing.

B7 Technological underpinning



E-University Possible Systems Architecture

111. The e-U will offer world class learning opportunities to learners across the globe. It will assemble learning modules and support services from multiple providers. To achieve this, it must be agile enough to adapt to changes not only in demand but also in technology. The technology to support the operation must be responsive, flexible, scalable and secure. The technology issues are covered in more detail in Annex 4.

112. The e-U technology platform will need to be accessed by many parties – both providers and consumers – with widely differing technical skills, differing technology platforms and differing access to technology. This will be a challenge but not an insurmountable one. As a consequence of it being a global, multi-party system, the technology platform must be developed using an open architecture in order to encourage interoperability between parties and to avoid being exclusive.

113. Such a robust and advanced technology platform will be required to underpin almost all the operations of the e-U. It will comprise all aspects of the communications infrastructure such as networks (Local or Wide Area Networks – LANs and WANs) and local IT infrastructure. It will also need to cover the specialist e-learning applications for learning delivery to the students, and the software applications will need to be integrated with back office administrative systems. There will need to be strong links between each of these elements and integration across different functions where necessary. The diagram above sets out the possible architecture for the hardware and network infrastructure.

114. Learning technologies will improve well beyond what is currently available, leading to the provision of increasingly interactive learning experiences. Internet technologies such as

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broadband are developing which will allow faster connection and transmission of data over the internet and will enable more interactive and content-rich experiences with a feel more like that of a TV. In the future, we think that concerns about technology capabilities will become secondary to those of providing a meaningful experience, to the point where the fact that a service is offered over the internet will effectively make little difference.

115. In order to provide an excellent service to learners and to streamline its back office systems, the e-U will need to make full use of the new e-learning technologies and in particular those of Learning Management Systems (LMS). A Learning Management System, working with flexible management of learning content, would provide the technological underpinning which would enable the assembly of component learning modules into a customised learning programme for an individual. It would also provide the interface with learners to help them to determine their needs, to select the appropriate learning content, and then to deliver the result.

116. Under guidance from the navigator, the LMS should also help pre-assessments to be carried out prior to managing and assembling the learning programme. It would enable the e-U to track and monitor an individual's learning programme, noting existing proficiencies, learning objectives, style, preferred delivery etc. The LMS should also be able to monitor an individual's progress over an extended period, which would be useful for lifelong learners.

117. Technologies enabling this are developing fast, and their use can provide one of the main differentiators between the e-University and its competitors. Keeping abreast of the latest technological changes will be vital, and the e-U will need to identify and work with appropriate technology partners to ensure that it does so. The e-U may also wish to invest in research and development into such niche technologies to keep abreast of, or even initiate, innovations in such e-learning technology.

118. A second component of the e-U's technology infrastructure will be a secure-access extranet which would allow multiple organisations, from differing technology bases, to access private e-U related information. An extranet is similar to a corporate intranet but enables multiple organisations to access private information from each of the organisation's internal networks via the public internet. It supports the same protocols and services as the public internet, including e-mail, news, chat rooms and web pages.

119. For the smooth and efficient administration of the e-U, we think it is important that content providers, providers of student support services and other supporting services (for example from libraries) should all be linked to the e-University by such an extranet. It could be based either on the public internet or, if acceptable, on the higher education network SuperJANET.

120. Throughout its operations, the e-U will need strong security arrangements which have the trust of all its customers and partners – not least in terms of the arrangements needed to collect income. Measures which can be taken against security risks include 'firewalls', digital certification and encryption. An overall security policy would include:

a. An assessment of risk to the systems (including that from competitors trying to overload the systems, credit card fraud, hackers breaking into the server and altering customer records, etc).

b. Assessing the need for various forms of consumer protection in the countries within which the e-U was operating.

c. Planning a proper security architecture.

d. Developing general organisational policies involving employees to protect customer privacy.

121. The first step in procuring such a complex technology platform would be to establish the more detailed operations of the e-U to define the functionality required, not only at the outset, but with a view to future requirements as the e-U and the internet environment develop. The second step would be to conduct a market evaluation of suitable technology providers, which would include assessing possible commercial off-the-shelf products as well as systems integrators who could develop or package a bespoke system – and who may become an important strategic technology partner. It is likely that the procurement strategy will result in a combination of bespoke and off-the-shelf solutions.

122. For the e-U's requirements, it will probably be necessary to use a systems integrator to assemble the base system and network infrastructure, whilst off-the-shelf products should be available for some of the more common applications such as finance or marketing. In addition, the e-U will want to use 'best of breed' e-learning applications – which are likely to be commercial applications, integrated into the main system. The systems integrator would integrate the different functions to provide any necessary direct communication between related parts of the operation.

B8 Ownership and structure

123. We see five main requirements for the e-U's corporate structure:

a. It must secure the support and input of the UK HE sector. It must capitalise and build on the expertise and reputation for high quality learning that already exists and use this to secure existing and new markets.

b. It must be flexible and highly responsive. This will require streamlined, fast and effective decision making processes with minimal bureaucracy.

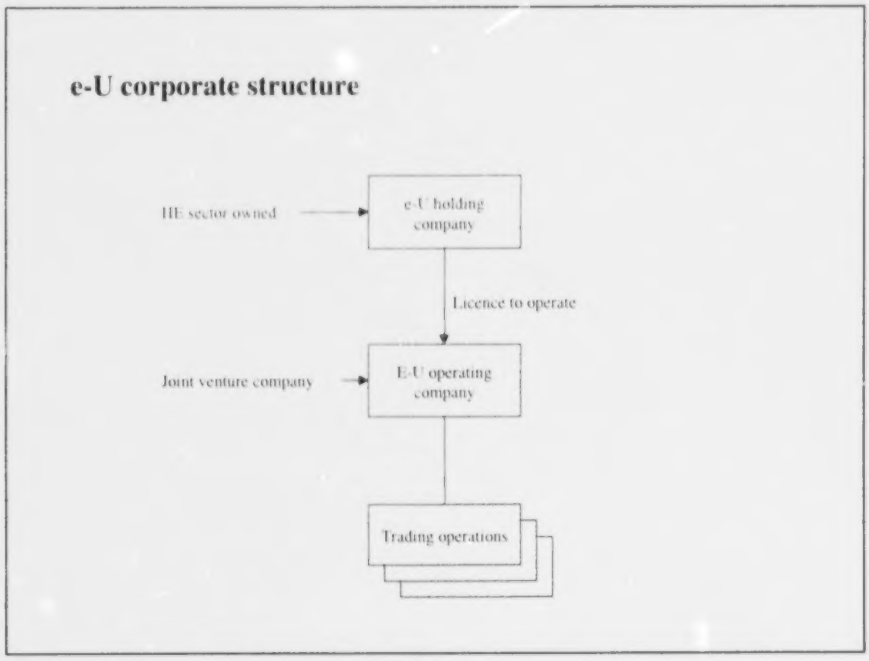
c. It must be market focused and entrepreneurial. The e-U will be in competition with highly commercial and focused operators. The UK brand should be an advantage but it will need to be coupled with a dynamic and market orientated organisation if it is going to succeed.

d. It must be attractive to the private sector both as investors and partners. The e-U will need private sector investment and private sector commercial expertise to make it work. If it is to attract the right partners they will want to be part of a commercially minded organisation and have access to a share of the profits. In return, in addition to their investment, the e-U will have access to marketing, contracting and other expertise.

e. It should provide a means of harnessing a powerful combination of brands which will provide the e-U with credibility and access to key resources and services.

Specialist branding consultants have advised us that the e-U will need to develop its own brand, but this process will be helped by association with recognised quality brands to support the e-U name.

124. In Annex 2 we set out four options for the corporate structure which have emerged from our work. We recommend that the e-U adopt the model set out in the figure below. This is a three level structure with an HE owned holding company, a joint venture operating and delivery company and, evolving over time, a series of subsidiary operating companies.



125. In the remaining part of this section we discuss the key features of each level of this model.

e-U holding company

126. HE sector ownership would be secured through the holding company. This company would be wholly owned by the sector either by the representative bodies of the HE sector (CVCP, SCOP etc) or by individual HEIs being members. It may be necessary for the HEFCE to retain a stake in the ownership of the entity given the likelihood of significant seed corn investment from public funds.

127. The holding company would own the e-U name and license its use to a joint venture operating company (see below). The role of the holding company would be to establish the terms of the licence for using the e-U brand and, having established the brand, to monitor its use on behalf of the sector.

128. In terms of legal structure, the holding company could either be a company limited by shares or a company limited by guarantee. Either of these limit the liability of the members or shareholders, in the former up to the nominal value of the shares, in the latter up to the level of the guarantee – usually £1 per member.

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129. Companies limited by guarantee are the usual corporate vehicle for charities (which are prohibited from distributing surpluses to members). A company limited by shares could not seek charitable status. Companies limited by shares offer greater flexibility in other areas, for example the ability to raise external investment, the ability to sell all or part of the company, and the ability to offer different levels of ownership to members through the number of shares held. .

130. The e-U's corporate structure will need detailed further work, including a need for legal advice.

131. The holding company would have a board of directors who would include representatives of the HE institutions and possibly, again given their initial investment in the e-U, nominees of the HE funding bodies. The funding bodies might nominate board members from outside the HE sector to try to secure business, and particularly e-business expertise. However, we would suggest that this input would be better injected at the operating company level.

132. The board of the holding company would have two main levers to control and influence the delivery of the e-U: first the terms of the licence, and second the stake in the operating company with the right to appoint directors to that board.

133. The terms of the licence and related legal documents will require very careful drafting and preparation. They will need to strike a balance to ensure that the HE sector's objectives are met whilst not hampering the operating company's ability to act in a dynamic way, responding quickly and effectively to market forces. The licence will need to cover issues such as the establishment, role and operation of the committee for academic quality, representation of the holding company in the operating company, how the company should address its non-commercial objectives and dispute resolution. Details on operational strategy should not be covered in the licence. These would be a matter for the operating company to address, although the holding company would have a strong influence on the operational issues through its representation on the board of directors of the operating company. We return to this below.

134. The duration of the licence will also need to be decided. Again a balance needs to be struck between, on the one hand, ensuring that the process of awarding and renewal of the licence has a real meaning and, on the other, setting a term which is sufficiently attractive to partners to commit investment to the venture. We suggest that a licence period of between 10 and 20 years should achieve this.

135. The success of the structure depends substantially on the effectiveness of the licence. It needs to satisfy the holding company as to its control over the name and UK HE brand, whilst leaving enough operational flexibility to be attractive to the private sector at the operating level.

136. In order to support the board and to take care of the administration of the company, the holding company may need some limited administrative support, perhaps one or two staff, but the company infrastructure and costs should be minimal. Such administrative support could be provided from within the operating company.

e-U operating company

137. As noted above, the holding company would award a licence to operate and deliver the e-U to an operating company. We suggest that the operating company should be a company limited by share capital, and it would be at this level that we would recommend bringing other partners into what would then be a joint venture.

138. We see a number of advantages in a joint venture arrangement:

a. It would tap a vital source of funding for the e-U alongside the seed corn investment from HEFCE. At this stage, it is impossible to be precise about the level of funding that will be needed to set up the e-U. What is clear is that it will be substantial, and that the higher the initial investment, the quicker the e-U will secure core markets. Establishment as a company limited by shares and therefore as a company capable of making and distributing profits would be key to attracting external investors and partners.

b. It would offer the possibility of embedding two or three key brands alongside the UK HE sector, for example a major broadcasting organisation, a national holder of learning support materials, and one or two others which could provide synergy in areas such as media and/or technology. This may give a more powerful marketing message from the start of operations on which to build the e-U's own brand identity.

c. It would bring private sector commercial awareness and drive to the heart of the organisation. We see a number of core areas such as marketing and branding where partners from related areas in the private sector would be able to offer key advantages. It may also be more attractive to potential e-business staff.

139. On the other hand, we recognise the potential risks of a partnership model. Perhaps the biggest perceived risk would be that the UK HE brand would be in the hands of a commercial entity and that commercial returns may take precedence over excellence. Of course this is not new – the HEIs themselves have to address this in their own operations – but it could be an issue in this new area of learning delivery. We believe that this risk would be contained through the effective operation of the committee for academic quality and by the HE sector's representation on the board of directors as well as through the licence agreement.

140. Potential conflicts of interest exist from the possibility of partner companies wishing also to be providers of services to the e-U. The ability of the partner companies to provide support and skills would, to a large extent, be the value that they would add to the e-U. But there would need to be a clear separation between the services that the companies could offer by virtue of their being a partner, and those aspects of the e-U's business where it would need to secure relationships and contracts with the best suppliers for each aspect. Conditions of separation would need to be built into any partnership arrangements.

141. By the same token, the e-U also needs to be able to obtain content from the best providers of that content, be that from within the HE sector or outside it. As for the partner companies, the HEI side of the joint venture would not have a privileged position in the competition to be content providers. Such flexibility will underpin the e-U reputation for high quality.

142. The operating company would have responsibility for the following areas:

- strategic direction
- business planning
- brand development and brand ownership
- excellence of products and services
- learning management services
- marketing (of core brand)
- technology platform and infrastructure
- content asset management services
- financial control, administration and records
- legal advice.

143. An early decision would need to be taken as to the areas of work which were central to the strategy or operations of the e-U (and so needed to be handled in-house), and those which could be contracted out (but still controlled by the central e-U operation).

144. We envisage that the operating company would be a self-standing company, drawing on the skills and expertise of the partner organisations. Therefore, subject to the composition of the partners, a possible model might see the HE sector providing the committee for academic quality and the processes underpinning it, a commercial partner providing marketing and branding expertise, and a core team within the company undertaking strategic and business planning.

145. The size of the central operation would depend on decisions about the core activities and about the in-house or external provision of services. With an overarching need to ensure a high quality operation, it is preferable to keep the core operation as small as possible, both to minimise cost and to ensure that the structure is agile and flexible enough to move quickly in a rapidly evolving market.

146. The board of the operating company would need to represent the range of interests delivering the e-U. We suggest its composition might be:

a. Appointees of the holding company.

b. Appointees of the partner(s) and investing organisations.

c. Chair of the committee for academic quality.

d. The senior executives of the e-U (chief executive, director of marketing, director of technology and director of finance).

147. A key issue to be resolved would be the balance between academics and others for the non-executive members of the board of the operating company. Evidence from other e-businesses suggests that the success of such new ventures is often linked to the ability and willingness of the board to challenge existing business models – rather than to see the new business as an extension of their existing business. This does not mean that the non-HE partners should control the majority of appointments to the board, rather, that some of the appointments by the HE-owned holding company could be from non-academic or business backgrounds. This would provide both a useful complement and possibly a check on the directors representing the partner interests.

148. Given the importance of having, and being seen to have, processes which support high quality learning, we believe that the role of the committee for academic quality should be set out explicitly in the licence agreement. It should be clear that decisions of the committee on matters of academic quality could not be overruled by the main board.

Subsidiary operating companies

149. Over time, we see scope for a range of subsidiary operating companies being set up beneath the main trading company. We envisage two different types:

a. Subsidiary companies which would focus on the development and/or delivery of specific capacities of the e-U (for example, to develop software for the technological platform, to deliver some of the operational activities such as the navigator service, or to develop a particular set of learning materials).

b. Subsidiary companies which would develop and/or deliver materials in a particular geographical and/or subject area (for example, to tailor material for a specific country or for a professional body, or to develop a specific subject area such as law).

150. This overall structure would enable the e-U to be much more fleet of foot than would a single operating entity. It would also have a number of further advantages. In particular it would provide different vehicles for different types of investment opportunity for private sector companies, as joint owners of the subsidiary operating companies with the e-U. This arrangement should help capture additional investment resources, as well as the enthusiasm of external partners, in joint developments. It would also mean there would be risk sharing for many of the operational activities of the e-U – and of course profit sharing – on terms defined at the time of the company's formation.

151. The subsidiary operating companies would thus provide opportunities for other external organisations – including HEIs – to invest in those parts of the e-U operations in which they had a specific interest, and to which they could add particular value. The e-U would seek to partner with the 'best of breed' private companies in these separate companies.

152. The structure would enable different types of relationship between the e-U and the operating companies. In some cases, equity could be exchanged for content, in others, it could be exchanged for the provision of specific services, and in others it could be given in return for a straight cash investment. The structure would also allow for the later spin-off of some e-U activities while protecting the core e-U operation. There may also be functions for which the e-U would set up an operating company but retain full ownership itself.

153. The downside of this proposed structure is its potential complexity. In our view this is no more than a reflection of the complexity of fast growing e-businesses. The e-U will need to have the flexibility to operate in the most appropriate way in any given market at any time – and this will change quite rapidly. It is unlikely that a single operating vehicle could achieve this as well.

Conclusion

154. It is vital to get the corporate structure right. We believe that the proposed structure will underpin the success of the e-U by:

a. Securing HE ownership of the brand and the name. The holding company would – through the licence, through its stake in the operating company and through its right to appoint directors – ensure that the sector retains control of the use of its brand, of the quality control process and of the strategic direction and development of the e-U.

b. Attracting partners and investors who would be vital as a source of funding and risk sharing. It would also secure private sector expertise in the areas where it is strong, particularly marketing and commercial operations (contracting, business planning etc).

c. Providing access to top quality brands which would enhance the UK HE brand, demonstrate broad base commitment to the e-U, and give access to a wide range of resources.

B9 Corporate functions

155. There are corporate functions which the e-U will need to operate from the centre. Some of these have been identified at various points above. We outline the main ones below. We think that the central functions should be kept to a minimum, but there may be some activities that need to be established initially at the centre but which could subsequently be transferred to subsidiary companies.

156. First, the e-U will need the capacity to determine its own **strategic direction.** This will require an analytical and decision making capacity at the centre, coupled with the ability to undertake business planning for any prospective new investment and/or subsidiary company.

157. A second central function will be the processes of setting and delivering **excellence** by means of the proposed committee for academic quality. Administrative and professional support would be needed for the committee which could be provided by an agreed combination of staff time from the universities supplying members of the committee (for which the universities should be compensated), staff of the e-U, and perhaps with some assistance from the recently established Subject Centres of the Teaching and Learning Support Network.

158. **Marketing**, including brand development and promotion, as well as the processes to gather market information, will make an essential contribution to the success of the e-U. The centre will need the analytical capacity and the professional skills required for these activities, although some could be contracted out.

159. The **technological platform and infrastructure** which underpin the operations of the e-U will need to be developed, maintained and kept up-to-date. Much of this work could be the task of one or more of the operating companies. Even if it is, the e-U at the centre will need to retain the capacity of 'intelligent client' to hold the necessary constructive dialogue.

160. There will also be a need for a central **legal capacity** to cover not only the contracts and sub-contracts with the various providers and companies, but also to deal with the difficult matters of copyright and IPR.

161. There will need to be an efficient **finance function** not only to undertake financial planning and control, but also to handle the financial transactions of receiving income, apportioning and distributing it. This will require a sophisticated financial infrastructure.

162. Finally there will need to be a **central administrative capacity** – which should be as excellent as the front line products and services of the e-U. Major changes are occurring in the administrative functions of universities as a result of internet technology. The e-U should be an exemplar of functions such as internet-based registration, student tracking and payments systems, maintenance of the databases and repositories of various kinds (both the modules for learners and the 'learning objects' for providers). Some or all of this could be contracted out.

163. Each of the above capacities will be essential for the e-U, although some of them could be contracted out. There are at least two other capacities which, while not essential, seem highly desirable. The first is the possibility that the e-U might undertake – or at least commission – **research into e-pedagogy** and perhaps into other topics central to its operations. Of course there are already others both doing and commissioning such research, but there may be gaps that the e-U will think it would be useful to fill.

164. The other capacity, perhaps of even more importance, would be for the e-U to **develop a range of e-tools and services** to help providers and suppliers achieve the required quality and technology standards. One such service could be to provide design support, perhaps on a consulting basis, to supplement the expertise that provider teams were able to assemble for themselves. Another service could be to make e-tools available to the design teams. A third possibility could be to offer training to those wishing to provide products or services. Any of these functions could be offered on a commercial contract basis or they could simply form part of the overall contract with a provider, with the resulting costs being reflected in the agreed distribution of future income.

B10 Revenue opportunities and headline costs

165. In this report we have set out what we believe to be a viable business model for the e-U. We have not attempted (and do not believe that it is possible) to produce a traditional business plan for the e-U.

166. The main reason for this is the nature of the market itself. The e-U is moving into uncharted territory and the business model as set out is a deliberate attempt to set the e-U ahead of the competition in terms of richness and reach. This means that the construction of a business plan based on a traditional market analysis is not a realistic way of assessing the possibilities for the e-U. The e-U will be entering markets which are as yet untested.

167. This is not a problem that is unique to the e-U. Many, if not all, new e-businesses are, in effect, developing new markets and opportunities on the basis that, supported by high profile marketing, and as internet take-up spreads, customers will be attracted to them. This is clearly not without risk, as some of the dot com companies set up over the last couple of years have discovered.

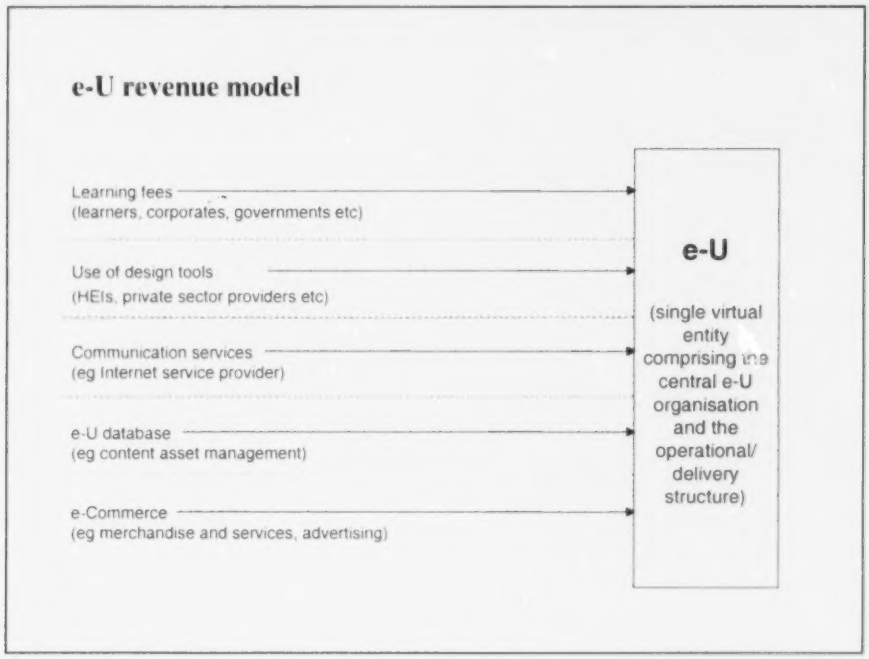
168. The HEFCE, the HE sector and its partners must therefore be prepared to accept a degree of risk in developing the e-U. These risks would be shared with others through the proposed joint venture structure. More important, the HEFCE and the HE sector have, in commissioning the project, already recognised the risk associated with **not** reacting to the changes in the learning market. The UK's overseas markets and lucrative corporate training and CPD markets are already being targeted by competitors. It is therefore easy to conclude that no action or delayed action would probably be a higher risk strategy.

169. However it would clearly not be acceptable for the HEFCE to invest public funds in the e-U completely 'unsighted'. The business model will, once agreed, need to be developed into an operational model, taking into account and drawing on, amongst other things, the specification of the technology platform, an analysis of available content and costed investment plans and, as far as possible, more detailed market research in the identified market areas. A key output of the developmental phase (see Part C of this report) will therefore be more detailed costings and revenue estimates to quantify and support the investment required from the HEFCE and others.

170. At this stage of the process, we have considered the main revenue opportunities for the e-U and the headline costs. This will help provide a framework to focus the development work around which a detailed plan can be constructed.

Revenue opportunities

171. Revenue opportunities arise from a variety of sources and for a number of services. The main ones are set out in the following diagram.



172. We discuss each of these in turn in more detail below.

Learning fees

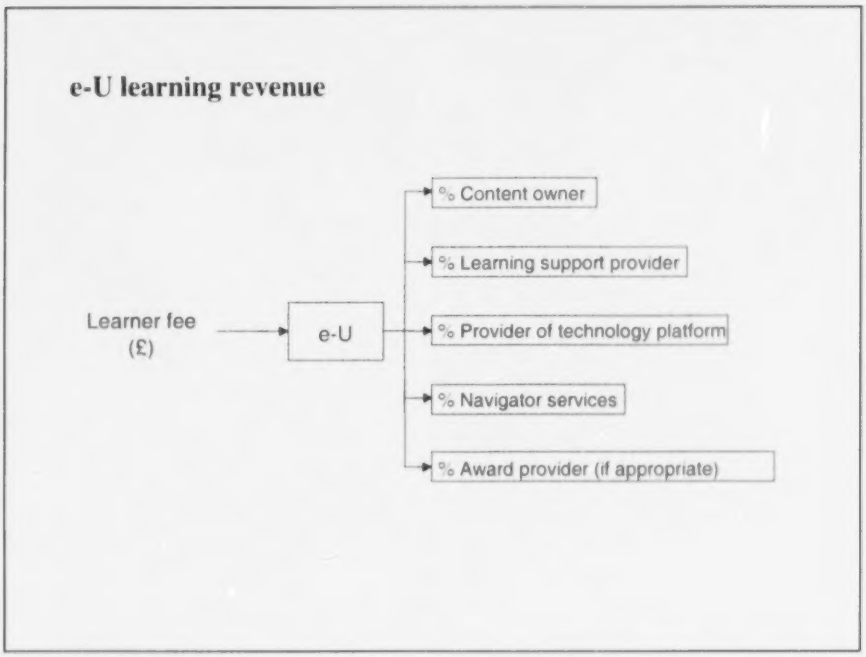
173. The core activity of the e-U and its core revenue stream will derive from the provision of learning. For the e-U's initial target markets, the customers would be fee payers (although some of them may be in receipt of funding support from their employer or their government).

174. We believe that the learner should pay fees direct to the e-U, and that the e-U should, in turn, pay the providers of the different elements of service. (In some cases, particularly in the early years and for 'whole courses' this could be a single provider.) The role of the e-U as a single channel for the fee is a vital one for two reasons. First, it makes things straightforward for the learner. A key element of the value added of the e-U model is to make things as simple as possible for the learner in selecting, accessing and undertaking learning opportunities. It will also be important that the administrative processes do not present any kind of block to potential learners. Using a micro-payments system, the e-U can ensure that the finances can be handled relatively easily.

175. The second reason is that it would give the e-U control of the funding flow. This puts it in a strong negotiating position with the different suppliers who would be contributing to the various elements of the learning experience. On a more basic financial point, it would also help support the e-U cashflow.

176. For the same two reasons, we believe that the e-U should register learners and hold their central records. This does not obviate the need for the student also to register with the institution making the award (if any) at the end of their period of study, but would provide an important way of offering a tailored service to the learners (see 'Customer relationship management' below).

177. The potential split of the learning revenue is set out in the diagram below.



178. The price of the learning experience will depend on three factors: the component costs of the learning experience, the state of the market in terms of market expectations, and the prices charged by competitors.

179. The cost drivers for the different components will include:

a. For **content** – the cost of developing the content which will itself be driven by complexity, interactivity etc. Cost per user will be a factor of this cost of development (and maintenance) over the expected life of the product and the anticipated sales volumes.

b. For **learning support** – the number of hours of support offered and the type of support: for example, one to one tutorial (voice or e-mail), access to a chat room, supervised discussion etc. We envisage a variety of different levels of support being offered, perhaps with a standard level included in the basic price and enhanced levels available on a 'pay as you go' service. Again this would allow the construction of a tailored service.

c. For **navigator services** – a base level navigator service might be part of the standard service offered. Additional advisory services would again be offered on a 'pay as you go' basis probably linked to time.

d. For **awards** – the fee payable to the provider of the award, agreed at the beginning of the programme of learning.

e. For **use of the technology platform** – an access fee payable to the e-U possibly linked to the duration of the course. Again we can foresee different levels of service, with a standard service provided and all courses and premium services such as e-mail (see below) offered for an additional fee.

180. The e-U itself will derive most of its income from the content element and the access fee for the technology platform.

181. The e-U's materials are likely to be sourced via three different routes:

A: Materials which already exist and meet e-U standards. These may only require minor investment (from the original producer or from the e-U) to ensure that it has the e-U 'look and feel.'

B: Material which is commissioned by e-U and so designed from scratch to meet e-U standards, design etc.

C: A range of content falling between A and B, that is material produced as a joint investment between e-U and partner provider(s).

182. The ownership, and therefore the rights to the income from the materials, will vary. In the case of (B) – commission from scratch – the e-U would own the material outright and would probably be entitled to all the income related to the material. In the other cases, the ownership is likely to remain in whole or in part with the original producer – although it might be possible for the e-U to buy the rights. Whilst this might be neater in terms of the income flows, in practice it may prove difficult to achieve as owners are often reluctant to hand over the rights to their material to another party. It could also be expensive and, arguably, would not be a good use of limited funding. In practice, the e-U is likely to have to come to an arrangement in each case to share the royalties earned from using the materials This will be administratively and legally challenging, but it does have the advantage of sharing the risk with the producer.

183. This highlights the issue of intellectual property rights (IPR) which will be core in the business of the e-U. IPR is an area in which the e-U will need a high degree of expertise in order to secure its interests – perhaps from one of its partner organisations.

184. The e-U will need a pricing strategy for each of its markets. It will neither need nor be able to charge a standard price. In some cases it may have to work, at least initially, with a local partner who could provide local support, local knowledge and delivery capability. The detailed revenue model is likely to vary in each market and the e-U will need to have a flexible approach, negotiating in each case.

185. In addition to the learning fees, we believe that there will be a range of other revenue earning opportunities for the e-U arising from its high-technological base and e-commerce markets.

Design tools and services

186. The e-U will be building a sophisticated set of design tools and services which will have a substantial value in the market. There will therefore be a strong case for it to operate

as an Application Service Provider (ASP) in its own right, offering its services to partner HEIs, and possibly to other education partners. These partners will enjoy all the benefits of using an ASP (including not having to establish their own IT department, and a fast time to upgrade to the latest software version). This may make them more inclined to work with the e-U because the technology deterrent would be removed.

187. As the e-learning market grows, it could be feasible for the e-U to offer these services to anyone in the e-learning market, even those outside the e-U such as corporate organisations that require the latest training software. The economics of this business are as yet unclear, and the detailed business proposition would have to be developed as part of the systems specification. The e-U would, of course, need to consider the impact on its own competitive position of allowing its design tools to be used by non-e-U suppliers.

188. In addition, the e-U could use the experience it gains whilst setting up the wider e-U technology (implementation of systems infrastructure and interfaces) and offer this as a technology consulting and implementation service to others, probably in a joint venture with systems integrators and applications providers. The e-U would be offering its experience of running an e-learning business and its ability to deliver a large IT project and understand the interfaces between different applications.

189. Again it may not be desirable to offer this service to its direct competitors but it could, for example, offer this to corporate organisations setting up e-learning platforms in-house. In this way, the e-U may recoup some of the considerable technology costs needed for its own set up.

Communications services

190. The current issues facing Internet Service Providers (ISPs) and Virtual-ISPs are covered in some detail in Annex 4. In summary, the e-U could be a Virtual-ISP offering internet access in return for a subscription charge. The effect of this would be to increase traffic to the e-U home page (as most subscribers would automatically come through this site). This would give the e-U the opportunity to make more revenue from offering services specific to students through e-commerce and advertising (as discussed below).

191. The benefit to the student would be in the form of student-specific and possibly free services. E-mail is a good example in that it keeps customers coming back even after, in this case, they would have finished their learning programme. It would be possible to offer this as a premium service on top of the access charge.

192. Again a business proposition would have to be developed as part of the systems specification. Amongst other things this would need to consider whether it would be a universal offering or a service restricted to specific geographies. It would be very complex and possibly too difficult to arrange an ISP service for all students wherever they were located.

Database

193. The e-U will develop and own a wide range of top quality content. As well as the e-U learning opportunities, there will be scope to sell some of this content (at 'learning object' level) to other education deliverers who may want to incorporate it into their own learning

programmes but without the full e-U learning programme. This would be a core part of the Content Asset Management function. Once again, care would need to be taken not to undermine the e-U's competitive position.

e-commerce

194. As an e-business, the e-U may wish to take advantage of the e-commerce activities that this will bring – as long as they do not conflict with the e-U's aims and image. These might include:

a. Merchandise and services offered by the e-U such as an alumni membership club and news service.

b. Merchandise and services offered by others; links to student related products (such as books, computer equipment and software) or services (travel, banking, recruitment). In these cases the revenue is normally commissioned as a percentage per transaction.

c. Selling advertising space for related products on the e-U home page.

d. Using the customer database. Whilst the primary purpose of accumulated customer data will focus on e-U business initiatives and improve customer service, these data would be very valuable to related businesses trying to target the same markets (respecting privacy of names and addresses).

195. By way of summary, we see a range of revenue opportunities for the e-U. The core opportunity will be in learning delivery. For the reasons set out at the start of this section, it is not possible to give any estimate of the scale of this revenue before the business model is developed and operationalised – and even then, it could only be very approximate.

Major costs

196. In the table below we have set out the key cost headings for the e-U. The costs associated with each would be determined by strategic policy decisions about the scale of the initial e-U operation. As noted earlier in this report, we assume an initial focus on a relatively small number of learning modules in a small number of target markets.

197. In high-technology sectors, the differentiation between capital and recurrent costs is becoming increasingly blurred due to the need for continual re-investment in both hardware and software – although there will undoubtedly be initial set-up costs to develop the technology platform and build up the stock of content. Thereafter, as the e-U begins operations, expenditure will level out, subject to the need for maintaining and upgrading the platform and the need or desire to extend and update the range of content.

Main assumptions

198. **Technology platform** – as noted in section B7, this will need to be a tailored platform with a requirement for scalability. In terms of finance, this would provide a good opportunity for a risk sharing partnership with a technology provider to design, build and operate the platform, for example in return for a share of the fee income linked to each learner. This would ensure that the partner had an interest in the effective development and operation of the platform. Details on the share of investment costs, level of service, and revenue sharing arrangements would be a core early task for the e-U.

199. **Investment in content and tools** – this will be the main area of HEFCE seed corn investment for the e-U in the early years. It will have two strands: the development and maintenance of the design tools, and investment in the content itself. The design tools will be a core asset of the e-U and could be developed with a partner in a similar way to the technology platform. Investment in content is likely to be mainly through HEIs. The e-U will need to direct this investment in accordance with its agreed priorities and retain the IPR in the content where it pays for it. Over time we would expect re-investment and development to be covered by revenue flows, and new investment to be covered either by accrued revenue or external investment, attracted by a proven business model.

200. **Marketing** – another core area for early investment. This will be necessary to establish the brand, albeit focused and tailored for the target markets. The marketing strategy in terms of the type, timing and approach will be an early task of the e-U.

201. **Organisation and infrastructure** – the e-U will need to exist as an organisation and therefore costs will be incurred on staff, accommodation and the other aspects of starting up and running a business. These costs should be minimised. The e-U should not develop a large head office function but will need enough of a physical presence to operate effectively and to attract and retain top quality personnel. The key competencies of the organisation will

be in contracting and brokering deals with partners, setting a strategic direction, identifying markets and quality management. During the set-up phase this would be an area in which the partner organisations should be expected to contribute, in terms of either personnel and accommodation or cash to fund them.

202. The two largest elements and the two key variables are the spend on the technology platform and on the content. Both of these are variable to the extent that the technology platform could have greater or lesser complexity (and therefore capability), and the content could be more or less complex and with more or fewer learning modules.

B11 Initial markets

203. With global markets in education changing, the concept of the e-U will provide new opportunities for learning with greater personalisation and customisation of delivery. As with other new economy businesses, the operations of the e-U will need to be demand-led rather than supply-driven. For education, there will always be an element of the latter, but in general the response to the changes arising from e-technology will require a change in culture in the sector.

204. Following its launch, we expect demand for the e-U offering to evolve quickly as the scale of the e-U concept will attract attention in its own right. It will be one of the most significant new entrants into the e-learning market and, with central government support and the likely involvement of one or more major commercial partners, it will create its own presence. Thus its first moves will strongly influence reactions to it and so will be critical – as with all new ventures. This means there needs to be a rapid initial market analysis – followed by fast, flexible developments by the e-U and by its providers.

205. Market analysis of the options, and resulting decisions about initial market priorities, will be needed on each of four dimensions:

a. Target users – companies, professional bodies, governments, other universities, individuals.

b. Subject levels – undergraduate, postgraduate, various professional CPD, executive courses.

c. Subject areas – business, IT, other professional areas, subject specialisms.

d. Geography – countries, regions within countries, sub-communities with special customisation needs.

206. Each of these will need further subdivision and analysis to fine tune the initial target markets.

207. Within these four dimensions, the strategy will also need to identify:

a. Countries in which UK HE already has acknowledged strengths and which would therefore be likely to welcome the innovation of the e-U.

b. Countries that the UK's competitors (old and new) are actively targeting to establish a base for their own expansion. This could indicate a potential that they have identified, as well as representing a possible threat to the UK's market share.

c. Countries for which there could be opportunities to secure a significant volume of students (most likely, for example, in fields related to career progression), perhaps because of the country's priorities for investment in 'new economy' infrastructure for its own developments, perhaps because of its sheer size (or both).

208. Within all these elements, the e-U will need to take into account the infrastructure provision and plans within a country. It will also need to consider any cultural issues associated with e-learning and its implications for change from traditional methods. There may well also be a need for some form of local business partner – not necessarily as educational support, but as a local 'presence'.

209. The initial market analysis will also need to take into account how 'buying decisions' are made, who and what influences them, the way price is presented and price sensitivities (for products or services), and the ability of consumers to pay. This will be different for the different segments of the market and will change over time as e-learning becomes more normal. However, core to early implementation will be a clear e-U view on its pricing policy – which will also be a significant factor in determining appropriate markets, sectors and timing.

210. Unfortunately there is little hard information on any of these points, and it will continue to be difficult to obtain. Nevertheless, the effort is worthwhile, and we support the proposal for a mechanism to gather such information as there is on a systematic basis in future – provided, of course, that such information is not made public and so available to the e-U's competitors.

211. The nature of the e-U (as for many e-businesses) means that quantitative estimates of demand can never be made accurately in advance, even within a fair range of uncertainty. E-businesses need to accept a greater degree of risk than do traditional ones, and the e-business in higher education is no exception. Partly in compensation, effective marketing, backed with good quality products, can generate demand – as long as the market areas targeted are 'broadly right'.

212. The identification of which areas would be 'broadly right' will be central to the e-U's market success. Taking a sensible first step into this environment with all the delivery factors in place will be critical. It is clearly important to have initial ideas as to where the e-U might first focus. We have identified a series of possible market segments which we suggest for further analysis. This has been based primarily on the work on markets for virtual learning undertaken by the team which produced the joint CVCP/HEFCE report on 'The Business of Borderless Education' (DfEE, 2000).

UK market

213. One of the objectives for the e-U is to widen HE participation of under-represented groups at **undergraduate** level. Those who are currently excluded from higher education for social or financial reasons are also least likely to have access to the appropriate information and communications technology (ICT), but students with disabilities could be a good initial target group. Initial target numbers should be low.

214. If assessed purely on commercial criteria, this group would not be a focus for the e-U, but its wider social objectives indicate that it should try to use new technology to reach such groups. We suggest that this could be achieved initially either through arrangements with organisations such as the University for Industry (UfI learndirect), or the National Grid for Learning (NGfL), or by allocating to the e-U the standard costs of a number of HEFCE-funded student places to cover the direct expenditure by such students on e-U courses.

215. The UK **postgraduate** market is relatively well developed with some 100,000 students in the more popular disciplines – management, IT, health and education. It is a highly competitive market between HEIs, which might therefore resent any e-U intrusion. Despite this, the UK postgraduate market is clearly attractive for web-delivered learning and we suspect that it will be increasingly targeted by non-UK providers. This suggests that the UK's interests could be protected if the e-U were to develop a defensive presence using UK-derived materials. Our initial conclusion is that some specific postgraduate areas in the UK should be included within the initial targets for the e-U.

216. The UK market for **continuing professional development (CPD)** is also potentially attractive. Compared with US universities, the HE sector in the UK has a small share of this total. The market is also expected to grow enormously. One report suggested that web-based training in the CPD market in the US could increase by 20 times in the next 4 years, due to its attractiveness to companies as a delivery vehicle. Similar arguments apply to the UK. Hence UK CPD could clearly be an attractive early market for the e-U, particularly if partnerships were formed with global companies which, as well as delivering volume, could help establish the e-U as a strong and credible brand.

217. Significant developments of various **'corporate universities'** within large companies also suggest a need for an HE sector response. Many of these 'universities' operate using an active web or new media delivery that has global reach. Some HEIs already deliver courses to this market. The e-U proposition, with its sector-wide and global reach, could help counter threats to this market from overseas competition in ways which single HEIs, or even consortia, could not.

Overseas markets

218. We have considered a number of potential overseas markets for the e-U. In addition to using projections of global HE demand and of internet use, target countries can be identified by taking account of DfEE/DTI priority targets, UK brand 'priority one' countries, and HEFCE initiatives. Primary drivers needing further investigation, in addition to those mentioned above, include those of employability, mobility of workforce, access to the technology platform and the feasibility of developing a UK pull over that of other countries.

219. Criteria for selecting overseas markets to target are the existence of a high level of acceptance and usage of technology, coupled with further planned investment in the country's infrastructure and application; and current investment internally in e-learning solutions for their own local delivery.

220. One area where we believe the e-U could have a major early impact, and which would fit well with its aims, would be global offerings of e-teaching and learning programmes to academic and other learning professionals. The e-U could enter the market as the provider of a professional learning 'tool' for the new-economy learning professional, and thereby win the support of the education profession by setting professional standards. Subsequent market moves could then address the CPD and postgraduate markets with a more secure academic supporting environment.

221. There may well also be significant market potential for the e-U to look to customers from the corporate sector, from overseas universities and perhaps most innovatively, from overseas governments and government bodies.

B12 Branding

222. The e-U's long-term success will rest on its ability to attract and maintain a significant share of the e-learning marketplace. To achieve this, the e-U brand must be strong, compelling and distinctly different from its competitors, not only today but into the future. A firm of branding specialists (Seigelgale) were commissioned to help us develop some initial ideas on branding.

223. The building of a distinct brand must be anchored in the e-U business strategy and be based on its prime objectives. To sustain differentiation as the market evolves and changes, the brand must be intrinsically linked to the core ideology of the e-U. A key element of the brand strategy will be to define this core and how it might be expressed in branding terms to capitalise on its differentiation.

224. It is too early to try to establish the values at the core of the e-U brand now, but a good place to start might be to suggest that 'the e-U should provide its learners with opportunities to improve their lives and their work and to increase the security of their future'.

225. The e-U will need to identify values that can be positively promoted and which will provide it with brand differentiation from its competitors that will endure over time. Positive aspects differentiating the e-U concept from its competitors – all of which are set out in sections above on the basic design – might include: greater breadth of provision for a better choice and more flexibility; better sensitivity to learners' needs and to their cultural environment and language; wider multi-sourcing of provision; more options for levels of support; more active and friendly assistance with choice; greater depth of interactive learning experience.

226. There would seem to be less mileage in promoting excellence as the main image of the e-U brand, not only because most HE provision would claim excellence too, but also because there is a danger of appearing not to take excellence as a given. There would also be a risk in promoting the use of leading edge technology as a distinguishing e-U characteristic without being certain that it could be sustained over a long period.

227. The e-U will need to promote its own name (once determined) and its own brand recognition and should not simply ride on the back of established university brands, not least as this could lead to confusion in the market. Nevertheless, it would be important initially for the e-U to be associated with at least some of Britain's premier educational institutions as 'associated' brands, such as those contributing to the committee for academic quality. Similarly, the proposed partnership(s) with one or more high profile commercial partners would also assist, but not substitute for, the e-U's own brand promotion. Global marketing and brand recognition of a partner linked to the e-U delivery would raise e-U brand awareness quickly and could create a good platform for promotion of core e-U branding as a unique entity.

228. One idea the e-U might consider is the concept of the 'e-U inside', as used by Intel or Nutrasweet, by which the e-U could lend its brand to appropriate ventures with a high quality process and platform which supported e-learning delivery. This might enable the e-U to become viewed as a standard for delivery and could develop wider revenue streams while also enhancing its own position in the market.

229. Once the core values of the e-U's brand have been established, its position in different markets will need to be defined. The e-U will be a player in different geographic and cultural marketplaces which may require it to be positioned differently (and 'British' may be appropriate in some of them). Establishing this local positioning would require an analysis of the individual markets to identify which elements of the brand resonate most.

230. The initial branding for the e-U need not be a big bang; it could be built up gradually. Nevertheless considerable resources will still be needed to develop the brand and to manage it over time. While defining the brand initially is fundamental to its sustainability, considered and timely brand management is also important in that, if it is not managed carefully, any early success would not be sustainable.

231. However, no matter how carefully or well the e-U brand name was developed, it would be undermined rapidly if learners' initial contact with the e-U itself was less than captivating. The experience of the first contact will be crucial and should include the high degree of interactivity and functionality which will be the hallmark of the e-U. The web-site must be very easy to use, user-friendly and exciting – it might also encourage potential learners to be concerned about what they are missing in their education.

Part C: Conclusion and next steps

C Conclusion and next steps

232. Our overall vision for the e-U is thus not a university in any conventional sense of the word, but instead consists of a set of facilities, devices and mechanisms to enable potential consumers to access the best of UK higher education – but coupled with a drive and energy to ensure that the business does indeed develop and thrive.

233. The e-U concept includes: mechanisms to facilitate the development of, and access to, products and services for various offerings; criteria and operating mechanisms for a globally excellent framework; an underpinning technological platform; some means to help potential learners select the learning experience for their needs; and supporting administrative processes. The whole would be set within an e-U corporate entity with HE sector ownership, and a corporate structure with an operating company and a series of subsidiary companies.

234. We recognise that this is an ambitious and radical vision. It cannot be built overnight – but a major advantage of the flexibility of the design is that it does not have to be. It can evolve. The e-U may start with some, perhaps even a preponderance, of fairly conventional courses in terms of their structure, but with their content developed to be put on an e-basis. Over time, learning modules would be developed (as would tutorial services), sometimes in response to markets, sometimes in anticipation of them.

235. We are sure this vision is right for the aims and objectives of an e-U. It is certainly exciting as well as inclusive.

236. But if the e-U is to succeed in its objectives it is going to have to move quickly to secure a market presence. The next steps fall into four phases: consultation, development; implementation, and launch

Phase 1: Consultation – October to December 2000

237. The key elements of this phase include:

a. Consult with the HE sector.

b. Formulate process to identify candidates for the committee for academic quality.

c. Set up process to identify private sector partners.

d. Consult with potential private sector suppliers.

238. In choosing partners, the clear message from the experience in the US is that the e-U will need to decide which organisations it wishes to view as potential partners and which as potential competitors. It will need to identify the most appropriate strategic partners who would allow it to expand market reach, increase opportunities for revenues, and provide better services to customers.

Phase 2: Development – January 2001 to April 2001

239. The main elements would be:

a. Set up an HE holding company.

b. Recruit members of the committee for academic quality.

c. Recruit chief executive.

d. Set up development team with key non-HE partners under a temporary agreement. Initiate main work to produce operational model including:

e. Technology specification.

f. Review of existing content – gap analysis.

g. Branding.

h. Market research.

i. Produce operating model and business plan including investment plans.

j. Draft e-U licence agreement.

k. Identify and line up potential bulk customers for the e-U services.

240. This development phase would bring together the prospective partners in the e-U to take the model through to an operational stage. It will require development funding but will not require large scale capital investment. One of the conditions of being a partner in the development would be an agreed contribution (in cash or kind) towards the development costs. The team would need to work under a temporary agreement, full partnership with the e-U being dependent on the success and attractiveness of the resulting operational model and the award of the licence to the operating joint venture company.

Phase 3: Implementation – April 2001 to December 2001

241. The main elements would be:

a. Set-up operating company with non-HE partners under formal contractual arrangements.

b. Award e-U operating licence.

c. Design and build technology platform.

d. Procure initial learning content.

e. Negotiate agreements with initial bulk purchasers.

f. Pilot and test all systems.

242. The implementation phase will require the start of large scale capital expenditure following the costed plans produced in the development phase. A pre-requisite for this phase would be the establishment of the operating company and the formal partnership agreements.

243. If this timetable is achieved, the e-U could aim to start operations during 2002.

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PRICEWATERHOUSECOOPERS

Higher Education Funding Council for England
Northavon House
Coldharbour Lane
BRISTOL
BS16 1QD

tel 0117 931 7317
fax 0117 931 7203
www.hefce.ac.uk

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